LMDS connection offers a diverse communications path, rather than the primary transmission capability.[57]

Even with metro networks in place in many cities, the vast majority of XO's sales to retail and wholesale customers rely on facilities (including UNEs) or services (including TDM or Ethernet services) purchased from ILECs and in limited instances from other providers.[58] That is because XO's networks still largely reach only a relatively small fraction of MTEs and other commercial buildings in core areas of select major metro areas, and customers often need to connect multiple locations in that metro area or in locations in more than one metro area.[59] For example, XO has lit fiber to **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[60] In contrast, ILEC networks have virtually ubiquitous access to customer locations throughout each metro area in which they operate,[61] and in a large majority of commercial buildings in each metro area, ILECs are the only providers with in-building connections.[62] Over **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY**

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56 *Id.* ¶ 25.

57 *Id.* ¶ 36.

58 Anderson Declaration ¶ 14.

59 *Id.*

60 *Id.* ¶ 14. The buildings where XO has lit fiber in these cities represent less than **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** commercially available buildings in each city.

61 Anderson Declaration ¶ 14; Kuzmanovski Declaration ¶ 8; Chambless Declaration ¶ 17.

62 Economist's Report ¶ 44-45.

CONFIDENTIAL] of TDM DS1 and DS3 circuits that XO obtains on a wholesale basis,[63] and virtually all dark copper loops for EoC, are provisioned by the ILEC network.[64] While XO obtains some TDM special access circuits from other competitors, the competitors are mostly reselling the ILEC DS1 or DS3 circuits, as XO itself does.[65]

XO's customers continue to request TDM-based services, although in **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** numbers.[66] These customers tend to have TDM legacy equipment in which they have invested that they are not ready to scrap.[67] Some of XO's other TDM customers simply have more basic service needs.[68] Nevertheless, XO has seen a significant uptick in demand for Ethernet services in recent years.[69]

ILECs make Ethernet services available at wholesale, although the wholesale pricing is sufficiently high that XO is unable, with its standard allocation above its wholesale input costs, to offer competitive prices in those locations where ILECs are reducing retail prices, whether in response to facilities-based competition or for some other reason.[70] Nonetheless, approximately **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the "off-

63 Anderson Declaration ¶ 5.

64 Chambless Declaration ¶ 18.

65 *Id.*

66 Anderson Declaration ¶¶ 30-32.

67 *Id.* ¶ 32.

68 *Id.*

69 *Id.* ¶ 20.

70 *Id.* ¶ 19.

net" Ethernet services XO sells at retail come directly from ILEC sources.[71] Where it can purchase Ethernet services from alternative providers that have facilities, the prices and service XO receives are better than those of the price cap ILECs.[72] Unfortunately, because competitive providers are often offering service to a limited number of the buildings or buildings in certain commercial areas, alternative sources of supply to ILECs are not available in most locations.[73] Given the cost of building network facilities, XO does not foresee this situation changing soon despite the high price and lower quality service offered by ILECs and despite the fact that by either using its facilities or those of more responsive providers, XO can better control its product offerings and obtain larger margins.[74]

XO does not offer Best Efforts Internet service to its customers.[75] This service does not have any service quality assurances, and so XO does not consider it a substitute to Ethernet services for its customers. XO has found its smallest customers are beginning to subscribe to this service from other providers.[76] Once such a customer switches to Best Efforts service, **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END**

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71 *Id.* ¶ 19. The percentage of XO's total off-net purchases supplied by the ILECs has been **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** in recent years. *Id.* This reflects the fact that more end users are moving to Ethernet services and XO's customers increasingly require connections in areas beyond where XO or competitive providers have or are able to cost-effectively construct facilities. *Id.*

72 *Id.* ¶ 20.

73 *Id.*

74 *Id.* ¶ 19.

75 *Id.* ¶ 33.

76 *Id.*

HIGHLY CONFIDENTIAL][77] Effectively, such customers have migrated from the Dedicated Services product market in which XO competes.

II. ANALYSIS OF COMPETITION FOR THE PROVISION OF DEDICATED SERVICES

In the FNPRM, the Commission discussed various methodologies that could be used to analyze the state of competition in the provision of Dedicated Services.[78] XO continues to submit that a market power analytic framework is the appropriate methodology because it "is comprehensive, economically sound, and data-driven."[79] Further, it uses as the fundamental market evaluation tool by the U.S. Department of Justice and Federal Trade Commission,[80] and was used as the analytical framework by the Commission in the *Qwest Phoenix Forbearance Order* to analyze local market competition.[81] Finally, despite efforts by the ILECs to poke holes in use of a market power analysis, their concerns (*e.g.* about administrability of individual petition for relief)[82]can be factored into the analysis, and in any event, they offer no alternative other than "deregulate us."

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77 *Id.*

78 *See* FNPRM, ¶¶ 58-71.

79 *See id.*, ¶ 61.

80 *See Horizontal Merger Guidelines*, U.S. Department of Justice and the Federal Trade Commission, (2010) *available at* http://www.justice.gov/atr/horizontal-merger-guidelines-08192010; *see also* Economists Report ¶ 27 ("Although the analytical framework set forth in the Merger Guidelines primarily addresses a future exercise of market power, its general approach is also appropriate for evaluating the current and past exercise of market power.").

81 *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, 25 FCC Rcd. 8622 (2010) ("Qwest Phoenix Forbearance Order"), *aff'd*, *Qwest Corp. v. FCC*, 689 F.3d 1214 (10th Cir. 2012).

82 *See* FNPRM, ¶ 61.

To its market power analysis, XO adds the panel regressions developed by its economists using the information supplied in the Mandatory Data Collection.[83] These panel regressions examine the effects of varying degrees of competition on prices. The economists found there is sufficient information to conduct regressions where the results are **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[84] XO includes them herein.

In the following sections, XO follows a market power analysis, defining relevant product and geographic markets, and then measuring competition in the each of those markets, both by examining structure and pricing effects. XO further examines two anticompetitive manifestations of market power: ILEC imposition of lock-up terms in Dedicated Services agreements, and ILEC efforts to institute a price squeeze.

A. Definition of Relevant Product Markets for Dedicated Services

In the Mandatory Data Request, the Commission sought information about two types of Dedicated Services: CBDS and PBDS. The Commission also inquired about Best Efforts Internet service to examine whether customers viewed this as a substitute for a Dedicated Service.[85] Below XO uses these service types as a base on which to define relevant product markets for purposes of examining the state of competition for Dedicated Services.

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83 *See* FNPRM, ¶ 68. ("As part of our one-time, multi-faceted market analysis we propose to conduct panel regressions designed to determine how the intensity of competition (or the lack thereof), whether actual or potential, affects prices, controlling for all other factors that affect prices.")

84 *See* Economists Report ¶¶ 53-95.

85 *See* FNPRM, ¶ 76.

Type I versus Type II Dedicated Services – In prior decisions, the Commission found that "on-net" and "off-net" Dedicated Services were in different product markets because purchasers viewed the former as "substantially superior" in terms of "performance, reliability, security, and price, and that these differences are sufficiently large that Type I special access services fall into a separate relevant product market from Type II."[86] This conclusion is supported by the Commission's finding in the *Pricing Flexibility Order* that relief should be provided "when competitors have made irreversible, sunk investment in facilities" and that accordingly, "UNEs do not represent sunk investment in facilities used to compete with incumbent LECs in the provision of special access and dedicated transport services."[87] Finally, from XO's experience in using and selling Dedicated Services, Type I service is a much superior and distinct product, with greater reliability, flexibility, and quality.[88]

Channel Terminations versus Interoffice Transport – As noted in the Declaration of George Kuzmanovski, XO has constructed transport rings in many major metropolitan areas; however, it has built laterals more selectively within those areas.[89] This is driven by the economies of scale that can be gained more quickly with transport facilities, as well as by the more immediate and significant demand that is not dependent on individual end user locations but the result of traffic aggregation, resulting in a financially acceptable payback period.

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86 *See, e.g., SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, WC Docket No. 05-65, Memorandum Opinion and Order, 20 FCC Rcd. 18290, 18305-06, ¶ 26 (2005) ("SBC/AT&T Merger Order").

87 *See Pricing Flexibility Order*, ¶ 94.

88 *See* Declaration of Anderson, ¶ 6; *see also* Economists Report ¶¶ 36-40, in which the economists explain that a Type II offering may be viewed as being in the same product market as a Type I offering but is viewed as an inferior offering for a number of reasons and therefore offers only limited competitive constraint.

89 *See generally* Kuzmanovski Declaration ¶¶ 10, 14, 19-20.

Moreover, XO and the industry in general use transport and channel terminations for distinct reasons, even if the two facilities may be cross-connected.[90] The Commission has recognized this product distinction in numerous decisions and placed Dedicated Services channel terminations and transport in different product markets.[91] Even in the *Pricing Flexibility Order*, the Commission found the two were distinct and constructed different – albeit erroneous – triggers,[92] and the Commission continued to make that distinction in the *Suspension Order*.[93]

TDM versus Ethernet (i.e., CBDS and PBDS) Dedicated Services – TDM and Ethernet Dedicated Services can be provided over the same physical transmission media (copper or fiber wireline facilities or wireless facilities). For instance, by bonding DS0 copper loops procured from ILECs, to the extent available to a given location, XO provides EoC at up to 100 Mbps in ideal conditions.[94] Fiber facilities alone, however, enable the provision of much higher performance Ethernet service with greater reliability, but only approximately 40% of commercial buildings, on average in any market, are connected with fiber from at least one provider.[95] Thus, copper continues to be an important transmission medium, although use of it will continue to

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90 *See* Chambless Declaration ¶ 3. Mr. Chambless explains that only in a small number of anomalous circumstances, less than **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** in Verizon North and South, for example, does XO have channel terminations and transport cross-connected. Chambless Declaration ¶ 13.

91 *See, e.g.*, *SBC/AT&T Merger Order*, ¶ 27.

92 *See Pricing Flexibility Order*, ¶ 101 ("We find that channel terminations between a LEC end office and a customer premises warrant different treatment than other special access and dedicated transport services.").

93 *See Suspension Order*, ¶¶ 66-67.

94 Anderson Declaration ¶ 17. *See also supra* pp. 8-9.

95 *See* Sean Buckley, "U.S. Fiber penetration reaches 39.3 percent of buildings, says VSG," FierceTelecom (Apr. 4, 2014), *available at* http://www.fiercetelecom.com/story/us-fiber-penetration-reaches-393-percent-buildings-says-vsg/2014-04-04.

shrink over time. Virtually all copper facilities available in the marketplace today are ILEC facilities, most of which are channel terminations; transport media are almost all fiber, whether provided by the ILECs or otherwise.[96] CLECs do not generally build non-fiber facilities, except in the narrow instance of hybrid fiber-coaxial facilities built by cable operators or fixed wireless facilities, both of which have inferior performance characteristics in comparison to fiber.[97] When XO has a current or prospective customer requesting Ethernet at a location, it engages in a multi-step process to determine how it can meet that customer's service needs.[98]

XO offers Ethernet services at various bandwidths and considers them a single product-line with variations in performance and price. This is due to two factors. First, it is relatively easy and low cost to increase bandwidth for an Ethernet customer. In fact, XO often increases bandwidth at almost no cost.[99] Second, the price difference to move to higher Ethernet speed

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96 Chambless Declaration ¶ 6.

97 On extremely rare occasions, XO may enter into long-term, capitalized leases for TDM facilities built by another provider, rather than purchase TDM services. Kuzmanovski Declaration ¶ 5.

98 XO first evaluates the performance, service, and reliability requirements and then considers the means by which it can provide the service. XO will use its fiber facilities if they are already in place at the customer location. If not, then XO will use its least cost provisioning tool to determine whether the least costly option is to construct facilities (generally preferred if cost-effective), to obtain wholesale inputs from the ILEC (either copper loops to provide EoC at the speeds requested, TDM circuits to provide EoS, or Ethernet service on a finished-service resale basis), or to obtain inputs or finished service from an alternative provider. Kuzmanovski Declaration ¶ 12; Chambless Declaration ¶ 6. In its discussions with customers, the subject of the transmission media is rarely raised. In other words, if XO can meet the customer's needs using one or more of the foregoing methods, XO itself will select the least cost option without customer input. Anderson Declaration ¶ 11.

99 Anderson Declaration ¶ 11.

offerings is relatively small compared to the initial provisioning cost.[100] For example, XO's typical monthly recurring charge for 100 Mbps service is **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** its 10 Mbps price, despite the ten-fold increase in speed.[101] Similarly, the monthly recurring charge for XO's 500 Mbps service is approximately only **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** more than for its 100 Mbps service, notwithstanding the 500% increase in speed.[102]

TDM and Ethernet services both are aimed at providing business customers with higher performance assured service and may be somewhat substitutable; however, neither XO nor, in its experience, its customers consider the two services to be close substitutes for a variety of reasons. As discussed in the attached declaration, XO built its business on providing DS1 and DS3 TDM services, and many of these TDM customers continue to value the service, particularly since it enables them to use their legacy equipment.[103] At the same time, while these lower speed TDM offerings are still a large part of XO's business, new retail customers largely want high performance Ethernet services and existing customers are increasingly upgrading as well.[104] That said, because existing TDM customers have investment in TDM equipment, they are more reluctant to move to the "next level" Ethernet service even where Ethernet prices are

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100 XO sees this both as a purchaser and seller. See Anderson Declaration ¶ 11; Chambless Declaration ¶ 14.

101 Anderson Declaration ¶ 11.

102 *Id.* ¶ 12.

103 *Id.* ¶ 32.

104 *Id.* ¶¶ 30-31.

dropping and bandwidth is increasing.[105] Similar resistance to changing bandwidth is not seen as customers move to different speeds within the spectrum of Ethernet offerings.[106] Further, any substitutability of TDM and Ethernet services is not bidirectional. XO finds that while some TDM customers are "graduating" to Ethernet service – typically at higher speeds than what they had been receiving as TDM customers – and replacing their equipment, XO does not see customers, even with low speed requirements, moving from Ethernet to TDM services. As such, despite some level of one-way substitutability, because there is a sufficient price and performance distinction between TDM offerings and Ethernet services, they should be considered to be in different product markets.

Wireline versus Wireless Facilities – While XO holds wireless licenses and provides fixed wireless services, it does not consider wireless media to have the performance capabilities or sufficient reliability for the provision of its Dedicated Services.[107] Rather, it uses its wireless media in the rare instance that it cannot reach a customer with wireline Type I or II facilities or to give a customer primary or backup transmission capabilities.[108]

Dedicated Services versus Best Efforts Internet Service – While Dedicated Services and Best Efforts Internet service both provide high speed IP transmissions, there are important

105 *Id.* ¶ 32.

106 *Id.* XO can typically re-tune Ethernet equipment to support higher speeds for customers, often through a remote hands contract. *Id.*

107 *See* Chambless Declaration ¶ 7; *see also* Economists Report ¶ 34 ("But fixed wireless is not generally viewed as a substitute in these settings because of reliability issues arising from congestion, interference and rain fade; the necessity of locating equipment with a clear line of sight; and building access problems.").

108 *See* Kuzmanovski Declaration ¶ 36.

differences.[109] Dedicated Services have service level assurances; Best Effort services do not. Ethernet services provide high speed symmetrical transmission capabilities; Best Efforts services' speeds tend to be lower and vary considerably and generally are not symmetrical. Dedicated Services permit transmission and networking among customer facilities in different locations in addition to permitting access to the Internet; Best Efforts services enable connections to the Internet only. As a result of these differing attributes, XO has found that while a growing number of smaller businesses with smaller spend are opting for Best Efforts services, its medium-sized business and enterprise customers continue to want Dedicated Services, and Best Efforts offerings have not made significant inroads into Mid-Size and Large/Enterprise Account customers.[110] Where XO loses some Small Account and smaller Mid-Size Account customers to companies offering Best Efforts Internet, it considers those customers as choosing a different product path because of their needs, and **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[111]

Retail versus Wholesale Dedicated Services – As discussed below, there is an absence of facilities-based competition in the provision of Dedicated Services to retail businesses

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109 *See* Economists Report ¶¶ 31-33 ("Best efforts broadband is excluded because it lacks service quality features – particularly availability, reliability, customer support, and security – required by most dedicated services retail customers. It may also lack the dedicated bandwidth (in both directions) those customers require…In recent years, as its price has declined and available bandwidth has increased in many locations, best efforts broadband has often become the preferred option for retail customers with limited demands for service quality…Accordingly, the growth in demand for best efforts broadband by small retail customers and some mid-sized customers does not justify expanding a dedicated services product market to include best efforts broadband. Best efforts broadband also lacks the availability, reliability, security, and dedicated bandwidth demanded by wholesale customers of dedicated services.").

110 *See* Anderson Declaration ¶ 35.

111 *Id.*

in virtually all markets. Consequently, because wholesale competition may be a precursor to retail competition, the Commission should evaluate the state of competition for Dedicated Services provided at wholesale to carriers. In numerous decisions, the Commission has done just that and has analyzed as a distinct product market the provision of Dedicated Services at wholesale relative to retail offerings.[112]

Relevant Product Market Summary – From the foregoing discussion, the provision of Dedicated Services offered at retail by ILECs and CLECs are in flux from lower speed TDM voice and data services provided over copper to EoC and EoS services to higher performance Ethernet services provided over fiber. That said, many legacy TDM customers, particularly small to medium-sized business customers, find TDM-based service to be sufficient for their needs, at least in the short run, and are not moving to higher speed Ethernet services even if they are priced similarly. In the wholesale market, a somewhat similar transition from copper to fiber transmission media is occurring, although CLECs and ILECs use copper facilities to enable both TDM and Ethernet services. As a result, XO finds the lines between product offerings often blur and defining product markets is a complex undertaking where not every situation fits neatly. That said, XO suggests the Commission distinguish between TDM and Ethernet services, as well as between Dedicated Services and Best Efforts Internet Services and between channel terminations and transport. Thus, the Commission should analyze separately the following product markets provided over wireline facilities: TDM or CBDS services (channel terminations), TDM or CBDS services (transport), Ethernet or PBDS services (channel terminations), Ethernet or PBDS services (transport), and Best Efforts Services. The

112 *See, e.g.*, *Qwest Phoenix Forbearance Order*, 25 FCC Rcd. 8622, 8647-49, ¶¶ 46-49

Commission also should separately examine the provision of wholesale Dedicated Services where it finds that retail markets for Dedicated Services are not fully competitive.

B. Definition of Relevant Geographic Markets for Dedicated Services

In the *Pricing Flexibility Order*, the Commission provided relief for an entire Metropolitan Statistical Area ("MSA") once the collocation triggers were met, concluding that "MSAs best reflect the scope of competitive entry."[113] Yet, seven years later, in the *SBC/AT&T Merger Order*, the Commission found that "the relevant geographic market for wholesale special access services is a particular customer's location, since it would be prohibitively expensive for an enterprise customer to move its office location in order to avoid a 'small but significant and nontransitory' increase in the price for special access service."[114] More recently, in the *Suspension Order*, the Commission further sounded the retreat from using MSAs as relevant geographic markets for the provision of Dedicated Services. In this decision, the Commission explained that "MSAs were developed not for the purposes of competition policy" and that "MSAs can be geographically extensive and, in many cases, may encompass areas with vastly different business density within their borders."[115] The Commission then found that "the record in this proceeding suggests that…MSAs have generally failed to reflect the scope of competitive entry…[which] in many instances…has apparently been far smaller than predicted."[116] Rather, the Commission concluded, based on available data, that competitive entry occurs in areas of

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(2010).

113 *See Pricing Flexibility Order*, ¶ 72. The Commission adopted a list of 306 MSAs.

114 *See SBC/AT&T Merger Order*, ¶ 28. To "simplify its analysis," the Commission grouped customers facing "similar competitive choices."

115 *See Suspension Order*, ¶¶ 26, 28.

"high demand" relative to the cost of providing service, that "demand varies significantly within an MSA," and accordingly competitive entry is unlikely to occur MSA-wide.[117] XO welcomes the Commission's recognition that competitive entry more often occurs in dense areas where demand is high and facility deployment is more economic.[118]

As explained in the attached Declaration of George Kuzmanovski, XO does not build speculatively but rather deploys its lateral facilities to buildings in response to customer service requests (where there is significant spend to recover the cost of deployment within a **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** period.[119] XO may, given the totality of the circumstances, build even if the customer's request for service will not lead, in itself, to recovery of the construction costs within **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** where there are reasons to believe that additional customers from the same (in large MTEs) or nearby buildings are likely to make up the difference.[120] In either event, when XO makes the decision to build a lateral to serve a customer, it will frequently deploy additional fiber that can be exploited at a later time.[121] XO also will opt to build one lateral facility over another if the route would pass buildings where XO believes there is sufficient spend or that further requests for service are more likely.[122] XO

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116 *See id.*, ¶ 35.

117 *See id.*, ¶ 36.

118 *See* Chambless Declaration ¶ 10. As discussed later, XO often finds multiple competitive providers are present in large MTEs, whereas in most buildings in all markets, the ILEC is the only facilities-based provider present. *See* Kuzmanovski Declaration ¶ 33.

119 *See* Kuzmanovski Declaration ¶ 14.

120 *Id.* ¶ 23.

121 *Id.* ¶ 26.

122 *Id.* ¶ 27.

thus agrees with the Commission's conclusion in the *SBC/AT&T Merger Order* that the relevant geographic market for purposes of analyzing the Dedicated Services market is the individual commercial building.[123] This conclusion is buttressed by the Economists Report:

> Customers of dedicated services provided over wireline, wholesale and retail, are tied to specific locations, and cannot substitute services located elsewhere. Nor would they relocate in response to a small increase in dedicated services prices at their existing location. Given relocation costs, it is difficult to imagine, for example, banks (example (a)), law firms (example (b)), cell towers (example (c)), or CLECs seeking last-mile connections (example (d)), responding to a small increase in the price of dedicated services at one location by moving their business to another location where prices are lower. Small differences in the price of dedicated services are similarly unlikely to matter materially to firms choosing initial locations…Accordingly, service to each customer location served by a dedicated connection – whether a specific office suite within a building, a particular cell tower, or the location of the channel term or local transport facility sought by a CLEC – is appropriately defined as a geographic market. Defining individual customer locations as geographic markets does not rule out also defining broader geographic markets.[124]

Further, as the economists suggest, to facilitate analysis, it may be appropriate to aggregate buildings with similar customer demand characteristics that are adjacent or in close proximity in the same geographic area. However, in doing so, the Commission needs to be cognizant that many business customers have multiple locations in different areas and that they often take service from a single provider. As a result, even if a CLEC has a network in one area, it may not be able to compete for a customer in that area that wants service in other areas where that CLEC (or other CLECs) does not have facilities of its own unless it can obtain just and reasonable Type II service from the ILEC. XO discusses its view of the relevant geographic market further in proposing new triggers to determine whether sufficient competition exists to warrant regulatory relief.

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123 *See supra* n. 114.

124 Economists Report ¶ 35 (internal citations omitted).

C. State of Competition in Relevant Markets

In the FNPRM, the Commission asks "whether the pricing flexibility rules result in just and reasonable special access rates and what regulatory changes may be needed."[125] As demonstrated in the attached declarations and the Economists Report, in MSAs where pricing flexibility has been afforded to the ILECs, competition frequently does not exist, especially in the provision of channel terminations. Accordingly, in these non-competitive, but deregulated, areas, the conditions for just and reasonable rates are not present, and further Commission action is required. In Sections III and IV of these Comments, XO explains the regulatory measures the Commission should introduce to replace the failed "price flex" regime.

As the Commission noted in the FNPRM,

> In the past, the Commission has defined market power as the power to control price. The U.S. antitrust agencies have also expanded their definition of market power to include the ability to 'reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives.' A market power analysis commonly evaluates separately 'competition for distinct services, for example differentiating among the various retail services purchased by residential and small, medium, and large business customers, and the various wholesale services purchased by other carriers' in a distinct geographic area. A market power analysis also typically involves the consideration of providers' market shares, supply and demand elasticity, and carriers' cost structures, size, and access to resources.[126]

Market Concentration

For both TDM and Ethernet channel terminations, the ILEC has ubiquitous reach and is in virtually all instances the only provider with facilities connected to the building.[127] The

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125 FNPRM, ¶ 56.

126 FNPRM, ¶ 60.

127 Chambless Declaration ¶ 17. The ILEC's network consists of legacy copper and fiber facilities. Where the ILEC is already present with its copper network facilities, over which it provides most of its legacy TDM services or UNEs, it is nonetheless much easier

presence of competitive provider facilities in commercial buildings, on the other hand, is limited, reaching a small fraction of buildings in any market.[128] In addition, CLEC presence is generally limited to the densest areas in a city where most commercial customers are located. This is evidenced by the data supplied to the Commission, which shows that **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** most of which are concentrated in select, dense areas of MSAs.[129] XO is **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[130] (XO, like other competitive providers, does not provide copper facilities.) By contrast, the ILEC is in buildings where XO has lit fiber **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** of the time.[131]

The Economists Report bears this out by looking at a much larger swath of data:

> **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** Measured either way, almost all buildings **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** have no more than two providers. When there is only one in-building provider, moreover, it is nearly always the ILEC. **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[132]

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for it to place fiber facilities, leveraging existing rights-of-way and other permissions from the building owner.

128 *See* Anderson Declaration ¶ 14, and discussion at note 60, *supra*.

129 *See* Economists Report ¶ 44-45.

130 Kuzmanovski Declaration ¶ 33; Chambless Declaration ¶ 16.

131 Kuzmanovski Declaration ¶ 33.

132 Economists Report ¶¶ 44-45 (internal citations omitted).

Thus, when viewed on an in-building basis, the great majority of the channel termination markets are monopolies or duopolies, both of which raise competitive concerns.[133]

Accounting for near-building presence changes the competitive landscape somewhat. Again ILECs networks are ubiquitous. As for CLECs, XO has found that in major metropolitan areas where it operates, there often are competitive fiber facilities close (within 0.5 miles) to multiple large MTEs in close proximity. However, outside these relatively compact and dense sectors of MTEs, the presence of competitive fiber is limited.[134]

As for the market for interoffice transport, XO is less concerned with concentration within major metropolitan area CBDs. In addition to its own metro rings in these areas, XO finds that competitors are often collocated at or housed near ILEC central offices and are able to offer XO competitive transport offerings to allow traffic to reach XO's network facilities at all requisite speeds, which are typically at DS3 and higher levels.[135] However, where one of the end points of the transport facility is outside a CBD, and perhaps the first ring of suburbs (at least in those markets where XO operates), the competitive presence is far less,[136] and building in these areas is not facilitated to any material extent by a provider having facilities, for example, in the CBD. As a result, these non-CBD areas are largely served only by ILEC facilities.

Price Effects

Before examining the data submitted to the Commission, there are various benchmarks that indicate ILEC Dedicated Services prices are supra-competitive. For instance, a comparison

133 *See id.* ¶¶ 46-52.

134 Kuzmanovski Declaration ¶ 33.

135 Chambless Declaration ¶ 10.

of ILEC prices for Dedicated Services to a series of "specific benchmarks"[137] shows that those prices are inflated above where they would be in the presence of real competition, including in those areas where the competitive showings were made under the triggers (prior to their suspension) set forth in the *Pricing Flexibility Order*. In addition, as discussed below, the wholesale prices charged by ILECs on a month-to-month basis under their tariffs which contain their Commitment Plans make clear that ILECs have not been constrained by competition in the Dedicated Services marketplace for DS1 and DS3 TDM circuits. The fact that ILECs are able to offer discounts of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** below their monthly tariff charges if a wholesale customer commits not to buy an absolute volume of services, conferring cost savings not on production as a pure matter of scale, but on the basis of committing to a percentage of historic purchases,[138] makes clear that the tariffed special access prices are unjust and unreasonable, a manifestation of market power. But even the ILEC's discounted prices are **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** higher than similar services offered by competitive providers.[139] XO finds, similarly, that prices for Ethernet services from facilities-based competitive providers, where they are present, are approximately **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END**

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136 *Id.*

137 FNPRM ¶ 62 (those benchmarks include "rates for reasonably similar services (e.g., rates for UNEs, retail broadband services such as DSL or cable modem service, or rates in price cap areas as compared to pricing flexibility areas), the costs associated with providing special access services (e.g., forward-looking costs), or rate-of-return estimates (e.g., ARMIS rates-of-return).")

138 In the case of Verizon, for example, if XO did not enter into a successor Commitment Discount Plan in 2014, XO faced an increase in monthly rates for DS1 and DS3 services of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** if it reverted to month-to-month rates. Chambless Declaration ¶ 39.

139 Chambless Declaration ¶ 32.

HIGHLY CONFIDENTIAL] cheaper than ILEC prices for similar capacity Ethernet services.[140]

An examination of the data confirms these indicators. As discussed in by the economists in their report,[141] their empirical (regression) analysis relating the price charged for a dedicated connection to the number of in-building and nearby facilities-based providers "shows that ILEC prices to end users **[BEGIN HIGHLY CONFIDENTIAL]** [redacted]

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140 *Id.* ¶ 11.

141 *See* Economists Report ¶¶53-67, where the analysis is set forth in detail, *e.g.* ¶ 57 (**[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**), ¶ 58 ("**[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**), ¶ 59 ("**[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**"), and ¶ 63 (**[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL] [BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**).

[redacted] **[END HIGHLY CONFIDENTIAL]**[142]

In sum, the data shows little to no evidence that where the suspended triggers had been satisfied and the Commission has granted pricing flexibility under the framework adopted by the *Pricing Flexibility Order*, that over the MSA in which pricing flexibility was afforded "carriers are working to provide better services at the same or lower prices."[143] Accordingly, the Commission has no basis for concluding that that pricing flexibility in the form adopted in the *Pricing Flexibility Order* has worked to ensure just and reasonable rates in the absence of rate regulation.

Potential for Competitive Entry

Competitive entry "can counteract or deter the exercise of market power."[144] However, as discussed below, deploying competitive networks to commercial customers, particularly those requiring service in multiple locations, is a costly and time-consuming process.[145] XO has been

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142 Economists Report ¶ 53; *see id.* ¶ 54 (**[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**); *see also id.* ¶¶ 68-95 for a discussion on **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**

143 FNPRM, ¶ 63.

144 Economists Report ¶ 96.

145 *Id. e.g.* ¶ 97-99 ("Entry involves substantial fixed expenditures, including the costs incurred to build a fiber ring and laterals and install electronics on the connections. The entrant may need a local construction permit, and permission from a building owner (in order to obtain building access). These are not always forthcoming, and even if they are, they add cost and delay, and may make entry prohibitively costly. Costs also depend, among other things, on the length of the laterals and fiber rings built, the nature of the

installing, expanding, and updating its network facilities for the past two decades, with virtually all major network construction completed a decade or more ago.[146] It therefore understands how to construct networks efficiently. It also understands that network construction is expensive, with costs lower in more dense areas and where transmission facilities can be attached to poles and not be buried.

XO entered initially by building metro rings in dense areas of major metropolitan areas, since these could aggregate traffic from more users and hence were more economical. Lateral facilities, in contrast, most often carried traffic – and were dependent on the spend – from a single location, limiting scale economies.[147] Regardless of whether the facility was interoffice transport or end user laterals, CLECs found it challenging to build viable networks because of the high cost of construction. But, even in the face of this challenge, they used their access to large amounts of capital in the 1990s and early 2000s to deploy facilities largely on "spec,"

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electronics added, whether the lines are buried, and local regulations (*e.g.,* a city may require replacement of cobblestones on scenic streets). Construction costs are typically higher in central business districts than in suburbs. CLEC costs of adding new facilities are lowest when those rings and laterals extend existing facilities because the CLEC is able to obtain substantial scope economies by taking advantage of network equipment, transport facilities, and fiber rings previously deployed nearby. For this reason, CLECs are more likely to find it profitable to build new dedicated services facilities in proximity to existing ones. Facilities-based entry at a distance from existing facilities (including cities not previously served at all) does occur, but when it does it is typically opportunistic, undertaken to serve unusually attractive customers, so not inconsistent with this generalization. In addition to costs, entrants consider the potential revenue they could earn from prospective customers when evaluating entry opportunities. Customers vary in the bandwidth the customer requires, the number of locations they wish to be served, the types of services they demand. All of these, and other factors, influence the potential revenue. Moreover, customers prefer to work with CLECs that have a strong reputation for reliability and customer service. This customer preference limits the potential revenues available to CLECs that are not already established.").

146 Kuzmanovski Declaration ¶ 4.

147 *Id.*

without guaranteed customer revenues. As a result, most facilities were not utilized efficiently, and most CLECs went bankrupt.

Today, XO seeks to leverage its existing metro networks, filling in facilities where customer demand justifies a build.[148] It rarely enters entirely new markets, and it does not build on "spec" within metro areas where it has existing networks.[149] Rather it is financially disciplined, not undertaking construction unless it expects to cover its costs within a period of **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**.[150] Thus, even though it has a $500 million construction initiative underway, XO will use this funding to reach at most only a few thousand additional buildings, almost all of which will be close to its metro rings and associated facilities.[151] This means that XO, when it does build a lateral, will largely build "where it is," providing additional choice in areas in close proximity – **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** linear feet – of its network but not entering new areas even if it has a committed customer.[152] Instead, in areas outside its network footprint within a given metro area, it will continue to rely heavily on access to ILEC facilities and services to reach these customers. This limits facilities-based competition for customers located in these areas and for multi-location customers that are located in both these areas and in the more limited areas where XO has facilities.

148 *Id.* ¶ 24.

149 *Id.* ¶ 14.

150 *Id.*

151 *Id.* ¶ 7.

As discussed above, other competitors, apart from cable operators, have similar construction practices to XO. Cable operators are distinct in several ways.[153] First, they may not have facilities at or near buildings since they primarily serve residential customers. Second, they tend to be focused on serving smaller business customers, not larger businesses and enterprises, with Best Efforts service and so have not built higher performance broadband facilities to these locations even where they serve commercial customers. Third, their facilities in buildings are often coaxial cable, not fiber, which limits the type and performance of the Ethernet service they provide (although cable operators are beginning to expand their fiber footprint in CBDs). Thus, while cable companies may in the long run have the potential to be robust competitors in the Dedicated Services market, they should not be considered rapid entrants.[154] Further, as discussed in the Economists Report, even if cable operators were considered rapid entrants, having only one competitor in-building or nearby results in a duopoly, where prices do not decrease much, if

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152 *Id.* ¶ 24. In addition to facing a challenging payback on constructing facilities, as discussed below, CLECs have entered into contracts with ILECs that lock-in their demand, making it difficult for them to migrate traffic to their facilities.

153 *See* Anderson Declaration ¶¶ 33-35.

154 *See Ex Parte* Filing by Maggie McCready, Vice President, Federal Regulatory and Legal Affairs, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 05-25 and RM-10593 (Jan. 14, 2016), in which Verizon submitted a study purporting to show that in five Core-Based Statistical Area markets served by Verizon as an ILEC, "cable is capable of providing business broadband services to at least 77.1% of businesses." This study, however, is flawed in numerous aspects. First, the study examines "business broadband services," which includes Best Efforts services, and not just Dedicated Services. It therefore muddles two distinct product markets. Second, just because a cable operator may use DOCSIS 3.0 technology does not mean it is offering – or even has the capability of offering in the near term – Dedicated Services. Third, even where a cable operator offers Dedicated Service over a DOCSIS 3.0 network, the underlying transmission medium may be hybrid-fiber coax, which is limited to lower speed service. To provide high-speed Dedicated Services with symmetrical bandwidth service and service level agreements, cable operators need to install fiber facilities and the necessary electronics and provide associated features and functionalities. Thus, the Verizon study is not a credible indicator of cable provision of, or entry into, the Dedicated Services market.

any.[155] **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]**[156]

D. Anticompetitive Manifestations of ILEC Market Power

The anticompetitive effects of the ILECs' enduring market power are manifested in two principal ways with respect to channel terminations, in addition to purely supra-competitive prices: (1) through the ILECs' Commitment Plans for DSn services (so-called lock-up agreements); and (2) through evidence of ILEC price squeezes affecting Ethernet service. XO discusses each in turn.

1. ILEC Lock-Up Agreements

As discussed above, ILEC monthly rack rates for DSn are so artificially high as to render competition using DSn services as a wholesale input unthinkable. To get a reasonable discount and offer services on a Type II basis, XO enters into volume and term commitments under the ILECs' tariffs, such as Verizon's Commitment Discount Plan. Under these plans, as explained in the Declaration of Michael Chambless, XO can obtain discounts of approximately **[BEGIN HIGHLY CONFIDENTIAL]** [redacted] **[END HIGHLY CONFIDENTIAL]** relative to monthly tariffed rates for DS1 or DS3 services (including channel terminations, mileage and transport) in return for maintaining active DS1 or DS3 services, respectively, for a period of five to seven years, although the resulting prices are still considerably higher – 30-40% -- than those of competitive providers where they have facilities.[157] However, rather than picking the volume

155 *See* Economists Report ¶ 51.

156 *See id.* ¶ 57.

157 Chambless Declaration ¶ 32.